

What is claimed is:

1. A panel assembly mountable along an opening in a dock wall for providing a dock shelter or seal, comprising:
a first panel and a second panel, wherein said second panel is adapted for essentially pivotal movement relative to said first panel about a first axis, and said first panel is adapted for essentially pivotal movement relative to the dock wall about a second axis.
2. A panel assembly according to claim 1, wherein said first panel has a front edge and a rear edge and the second panel has a front edge and a rear edge, and the rear edge of said second panel is pivotally connected to the front edge of said first panel.
3. A panel assembly according to claim 2, wherein the rear edge of said second panel is hingedly connected to the front edge of said first panel.
4. A panel assembly according to claim 3, wherein the rear edge of said second panel is castellated and the front edge of said first panel is also castellated such that the rear edge of said second panel and the front edge of said first panel interlock to form a hinge joint.
5. A panel assembly according to claim 4, further comprising a stay, wherein said panel assembly has a length and said stay is positioned in an opening extending the length of said panel assembly through the castellated front edge of said first panel and the castellated rear edge of said second panel.

6. A panel assembly according to claim 5, wherein said stay biases said panel assembly to an open position.
7. A panel assembly according to claim 2, wherein:
said panel assembly has an interior face on the side of the dock opening and an opposing exterior face;
said panel assembly further comprises at least one backing member positioned at the first axis on the interior face of the said panel assembly.
8. A panel assembly according to claim 7, wherein the backing member biases the panel to an open position where the second panel is held away from the first panel.
9. A panel according to claim 7, wherein the backing member is chosen from springs, triangular foam blocks, elastomer panels, rubber panels, and fiberglass composites.
10. A panel assembly according to claim 7, wherein said first panel has recessed portion at or near the front edge of the first panel, and said second panel has a recessed portion at or near the rear edge of the second panel, and the backing member is adapted to fit between the recessed portions.
11. A panel assembly according to claim 1, wherein the first panel and the second panel comprise a rigid but flexible material.

12. A panel assembly according to claim 11, wherein the material is blow molded.
13. A panel assembly according to claim 1, wherein at least one of said first or second panels comprise a plurality of panel portions which are assembled to form said first or second panels.
14. A panel assembly according to claim 2, wherein the rear edge of said first panel is directly or indirectly mountable to the dock wall.
15. A panel assembly according to claim 14, wherein said panel assembly further comprises at least one L-shaped bracket for flexibly mounting the rear edge of said first panel to the dock wall.
16. A panel assembly according to claim 1, further comprising a seal member located at the front edge of said second panel, the seal can be integral with said second panel, or a separate component attached to said second panel, or can be both integral and a separate component.
17. A panel assembly according to claim 15, wherein the seal member comprises a hook portion located at the front edge of said second panel, the hook portion comprises a seal strip.
18. A panel assembly according to claim 1, wherein said first panel has a length and said second panel has a length and the length of said first panel and the length of said second panel are sized for vertical mounting along the

opening in the dock wall.

19. A panel assembly according to claim 1, wherein said first panel has a length and said second panel has a length and the length of said first panel and the length of said second panel are sized for horizontal mounting along the width of the opening in the dock wall.

20. A dock shelter or seal for mounting along an opening in a wall of a dock, the dock having a dock floor, comprising:

at least a panel assembly comprising a first and second panel, wherein said second panel is adapted for essentially pivotal movement relative to said first panel about a first axis, and said first panel is directly or indirectly mountable to the dock wall.

21. A dock shelter or seal according to claim 20, wherein the dock shelter further comprises at least a second panel assembly, wherein the first panel assembly is directly or indirectly mountable along a side of the opening in the dock wall which is approximately perpendicular to the dock floor, and the second panel assembly is directly or indirectly mountable along a second side of the opening in the dock wall which is also approximately perpendicular to the dock floor.

22. A dock shelter or seal according to claim 21, wherein the dock shelter further comprises a top portion panel assembly, wherein the top portion panel assembly is directly or indirectly mountable to a side of the opening in the dock wall which is parallel to the dock floor and the top portion panel

assembly is positioned along the dock wall above and substantially perpendicularly to the first and second panel assemblies.

23. A dock shelter or seal according to claim 22, further comprising a top portion panel assembly having a first and second panel, wherein said second panel is adapted for essentially pivotal movement relative to said first panel about a first axis, and said first panel is directly or indirectly mountable to the dock wall.

24. A dock shelter or seal according to claim 23, wherein at least one of the first, second, or top panel assemblies each further comprise a sealing member.

25. A dock shelter or seal according to claim 20, wherein said first panel is adapted for essentially pivotal movement relative to the dock wall about a second axis.

26. A dock shelter or seal according to claim 25, wherein said first panel is directly or indirectly mountable to the dock wall for flexible movement.

27. A dock seal assembly mountable along an opening in a dock wall, comprising:

an expandable panel assembly configured to accommodate trucks of varying widths, comprising a first and a second panel assembly, the first panel assembly including:

a rear first panel having a front edge and a rear edge;

a front first panel having a front edge and a rear edge;

a first seal portion;

wherein the rear edge of said front first panel is pivotally connected to the front edge of said rear first panel defining a first axis of rotation, the rear edge of said rear first panel is adapted for essentially pivotal movement relative to the dock wall about a second axis of rotation and is directly or indirectly mountable to a first vertical side of the dock wall opening, and the first seal portion is located at the front edge of said front first panel;

the second panel assembly comprising:

a rear second panel having a front edge and a rear edge;

a front second panel having a front edge and a rear edge;

a second seal portion;

wherein the rear edge of said front second panel is pivotally connected to the front edge of said rear second panel defining a third axis of rotation, the rear edge of said rear second panel is adapted for essentially pivotal movement relative to the dock wall about a fourth axis of rotation and is mountable to a second, opposing vertical side of the dock wall opening, and the second seal portion is located at the front edge of said front second panel; and,

wherein the first, second, third, and fourth axes of rotation are substantially parallel to one another.

28. A dock seal or shelter according to claim 27, wherein the expandable panel assembly is configured to accommodate truck widths ranging from about 8' to about 8' 6" and wherein the trucks may be parked up to 6" off-center.

29. A dock seal apparatus for mounting on a dock wall and for sealingly engaging a truck parked at a loading dock, comprising:

a first expandable panel assembly directly or indirectly mountable to the dock wall and configured to sealingly engage trucks of varying widths, comprising:

a rear panel means;

a front panel means; and,

a sealing member means located at an edge of said front panel means, wherein said front panel means is operably coupled to said rear panel means such that said front panel means deflects toward the dock wall opening when said expandable panel assembly is engaged by the vehicle, and said rear panel means is adapted to be operably coupled to the dock wall such that said rear panel means moves toward the dock wall opening when said expandable panel assembly is engaged by a sufficiently narrow vehicle and remains substantially unmoved or moves away from the dock wall when said expandable panel assembly is engaged by a sufficiently wide vehicle.

30. A dock seal apparatus according to claim 29, wherein said front panel means is operably coupled to said rear panel means by a hinge means.

31. A dock seal apparatus according to claim 30, wherein said hinge means biases said front panel away from the dock wall opening.

32. A dock seal apparatus according to claim 29, wherein said first expandable panel assembly is sized to mount along a first vertical side of the dock wall opening.

33. A dock seal according to claim 32, further comprising a second

expandable panel assembly sized to mount along a second vertical side of the dock wall.

34. A dock seal according to claim 33, further comprising a top portion panel assembly sized to mount along a horizontal side of the dock wall.

35. A dock seal according to claim 34, wherein the top portion panel assembly comprises:

a top rear panel means;

a top front panel means; and

a top sealing member means located at an edge of said top front panel means, wherein said top front panel means is operably coupled to said top rear panel means such that said top front panel means deflects toward the dock wall opening when said top portion panel assembly is engaged by the vehicle, and said top rear panel means is mountable along horizontal side of the dock wall opening.

36. A dock seal according to claim 35, further comprising a first corner panel adapted to overlap said top portion panel assembly and said first expandable panel assembly when mounted, and a second corner seal adapted to overlap said top portion panel assembly and said second expandable panel assembly when mounted.

37. A method of providing shelter about the end of a vehicle body parked at a dock opening, comprising:

installing a first panel assembly to a first vertical side of the dock

opening, the first panel assembly comprising:

a first front panel and a first rear panel, wherein said first front panel is adapted for essentially pivotal movement relative to said first rear panel about a first axis;

wherein installing the first panel assembly comprises flexibly mounting the first rear panel to the dock wall; and,

installing a second panel assembly to a second vertical side of the dock opening, the second panel assembly comprising:

a second front panel and a second rear panel, wherein said second front panel is adapted for essentially pivotal movement relative to said second rear panel about a second axis;

wherein installing the second panel assembly comprises flexibly mounting the second rear panel to the dock wall.

38. A method according to claim 37, wherein the first panel assembly is indirectly mounted to the dock wall.

39. A method according to claim 37, wherein the first axis of rotation and the second axis of rotation are substantially perpendicular to the dock floor and substantially parallel to one another.

40. A method according to claim 37, further comprising installing a top portion assembly along a top horizontal side of the dock wall opening.

41. A method according to claim 40, wherein the top portion assembly comprises a top front panel and a top rear panel, wherein said top front panel is

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adapted for essentially pivotal movement relative to said top rear panel about a first axis.

42. A panel assembly according to claim 16, wherein said seal member comprises a serrated portion.